EXHIBIT NO. DX-4 evid.
CAUSE NO. 3:22cv734-DPJ-HSO-LHS
WITNESS
CLERK: SHONE POWELL

FEB 26 2024

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF MISSISSIPPI
Candice Crane, REPORTER

UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF MISSISSIPPI
NORTHERN DIVISION

MISSISSIPPI STATE CONFERENCE OF THE NATIONAL ASSOCIATION FOR THE ADVANCEMENT OF COLORED PEOPLE; DR. ANDREA WESLEY; DR. JOSEPH WESLEY; ROBERT EVANS; GARY FREDERICKS; PAMELA HAMNER; BARBARA FINN; OTHO BARNES; SHIRLINDA ROBERTSON; SANDRA SMITH; DEBORAH HULITT; RODESTA TUMBLIN; DR. KIA JONES; ANGELA GRAYSON; MARCELEAN ARRINGTON; VICTORIA ROBERTSON,

Plaintiffs,

vs.

STATE BOARD OF ELECTION COMMISSIONERS; TATE REEVES, *in his official capacity as Governor of Mississippi*; LYNN FITCH, *in her official capacity as Attorney General of Mississippi*; MICHAEL WATSON, *in his official capacity as Secretary of State of Mississippi,*

Defendants,

AND

MISSISSIPPI REPUBLICAN EXECUTIVE COMMITTEE,

Intervenor-Defendant.

Case No. 3:22-cv-734-DJP-HSL-LHS-FKB

SECOND SUPPLEMENTAL EXPERT REPORT OF THOMAS L. BRUNELL, Ph.D.

December 6, 2023

EXHIBIT
DX-4

SECOND SUPPLEMENTAL EXPERT REPORT

On October 23, 2023, I filed my Supplemental Report in response to Prof. Orey's Amended Expert Report. On November 14, 2023, Prof. Orey submitted his Second Amended Expert Report whereby he attempted to address his errors in his CES and BISG analysis as pointed out by my October 23rd report. I now file this Second Supplemental Report to address Prof. Orey's Second Amended Expert Report (Nov. 14) and to address certain comments made by Prof. Orey in his Rebuttal Report of November 22, 2023 whereby he explains corrections made to his Second Amended Report (Nov. 14).

In footnote 4 (pg. 2, Orey rebuttal), Prof. Orey explains that he used the wrong variable in his initial report and then he applies the weighting variable "vvweight" to his analysis. For some reason, that Prof. Orey does not explain, when he runs his regression analysis he uses the "commonweight" variable, which includes respondents in the data who's vote was not validated by the survey. One possible reason for the switch is that when the same regressions are run with either of the voter validated weights ("vvweight" or "vvweight_post"), the results are not statistically significant.

I should note that in my initial supplemental report (Oct. 23) I used the same variable that Prof. Orey did and used the "commonweight" weighting variable so that my results would be an apple-to-apple comparison. When using the voter validated weights there are fewer observations in the analysis and I did not want the response to be that the discrepancy in the number of observations was the reason for the differences in our results.

Prof. Orey's Second Amended Report (Nov. 14), (which he confirms in his rebuttal report of November 22, 2023) reinforces my conclusion that the CES dataset shows no significant difference in turnout between Blacks and Whites in Mississippi in 2020. He has two tables in the report – Table 1 (barely) shows a significant relationship between race and turnout in 2020 in the state, but he inexplicably includes two observations that he deleted from his previous report – both of whom are non-citizens. Moreover, he uses the wrong weighting variable by his own admission.

Table 2, which removes the two non-citizens from the analysis, shows no significant relationship between race and turnout, but it also uses the incorrect weighting variable. But to be clear – the only instance of statistical significance relies on including two unnecessary respondents (the non-voters), and when removed the statistical significance is gone.

Below I re-run the analysis with the correct weighting variable and regardless of whether the two non-citizens are included, there is no statistically significant relationship between race and turnout in Mississippi:

Table 1. Linear Regression: Turnout With Non-Citizens Using "vvweight" for weighting

	Coef.	std. err.	T-stat	p-val	95% conf. interval	
Black	-.143	.075	-1.92	0.055	-.290	.003
Constant	.868	.032	26.79	0.000	.804	.931

N=278, ***p<.001, **p<.01, *p<.05

Table 2. Linear Regression: Turnout With Non-Citizens Using "vvweight_post" for weighting

	Coef.	std. err.	T-stat	p-val	95% conf. interval	
Black	-.060	.094	-0.64	0.526	-.245	.126
Constant	.820	.052	15.69	0.000	.717	.923

N=227, ***p<.001, **p<.01, *p<.05

Table 3. Linear Regression: Turnout Without Non-Citizens Using "vvweight" for weighting

	Coef.	std. err.	T-stat	p-val	95% conf. interval	
Black	-.143	.075	-1.92	0.055	-.290	.003
Constant	.868	.032	26.79	0.000	.804	.932

N=278, ***p<.001, **p<.01, *p<.05

Table 4. Linear Regression: Turnout Without Non-Citizens Using "vvweight_post" for weighting

	Coef.	std. err.	T-stat	p-val	95% conf. interval	
Black	-.060	.094	-0.64	0.526	-.245	.126
Constant	.820	.052	15.69	0.000	.717	.923

N=227, ***p<.001, **p<.01, *p<.05

As mentioned, there are two weighting variables that are used for respondents with validated voting records – in which the survey confirms whether respondents actually voted or not by checking the voting records after the election – one is named "vvweight"

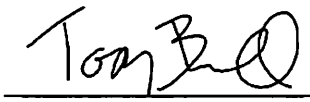
and the other is "vvweight_post". The results above show that regardless of whether the analyst keeps the two non-citizens in the model or not, when either validated weighting variable is used, the coefficient for the "Black" variable is not statistically significant. This is clear by examining the "p-val" numbers which must be less than or equal to .05. The second method for checking statistical significance is to look at the 95% confidence intervals – the last two columns in each table – this is the range of values for our estimate given the inherent statistical uncertainty. If the confidence interval spans over zero (i.e. one number is positive and the other is negative), then we conclude that the result is not statistically significant. Prof. Orey, in order to claim statistical significance, moves the goal line by claiming that when $p<.10$, the result is significant. This is a lowering of standards and since we are dealing with real public policy here, if anything, the court may favor higher standards than what scholars prefer.

Ultimately, I summarize the results Prof. Orey's results from the CES as follows – the only instance in which he finds (just barely) statistically significant differences in turnout among Blacks and Whites is when he uses the wrong weighting variable and he includes two non-citizens in the analysis. Otherwise, the results show no statistically significant difference in turnout. This, as a reminder, is only from the 2020 election – we can only guess what the differences are in recent prior elections and what the trend over time is for racial differences in turnout in Mississippi.

Finally in Prof. Orey's revised BISG analysis in his Second Amended Report he corrects an input error which decreases the number of missing voters from his file, though he is still missing more than five percent of all votes cast. He now has 1,263,390 observations in his dataset and the Mississippi SOS reported in the EAVES report that

total turnout in Mississippi in 2020 was 1,334,155. Thus, there are still 70,765 missing voters from 2020. We don't know anything about these missing voters or how the inclusion of their information would affect Prof. Orey's analysis.

I declare under the penalty of perjury that the foregoing is true and correct to the best of my knowledge. I reserve the right to amend or supplement my report if additional facts, testimony, or materials come to light.



December 6, 2023

Thomas L. Brunell